

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1, 12 and 13 are rejected under 35 U.S.C. 102(b) over the patent to Shieh.

Claims 2-4 are rejected under 35 U.S.C. 103(a) over the patent to Shieh in view of the patent to Herb.

Claims 5, 9, 10 are rejected under 35 U.S.C. 103(a) over the patent to Shieh in view of the patent to Mayor.

Finally, claim 8 is rejected under 35 U.S.C. 103(a) over the patent to Shieh in view of the patent to Gehring.

Also, the claims are rejected under 35 U.S.C. 112.

In connection with the Examiner's formal requirements under 35 U.S.C. 112, applicant has amended the corresponding claims.

It is believed that the changes to the claims are self explanatory. As for the Examiner's question with respect to claim 7, it is respectfully submitted that this claim defines that the support 3 is provided with further conductor structures 4 which contact with the first mentioned conductor structures 5 on the substrate 2 through second bond wires 9.

It is also believed that the Examiner's grounds for the rejection of the claims for formal reasons under 35 U.S.C. 112 should be considered as no longer tenable and should be withdrawn.

After carefully considering the Examiner's grounds for the rejection of the claims over the art, applicant has amended claim 1, the broadest claim on file, to more clearly define the present invention and to distinguish it from the prior art.

Claim 1, the broadest claim on file, defines
a laser diode arrangement, comprising a joint electrically
insulating substrate 2,
a plurality of laser diodes 1 arranged in said joint electrically
insulating substrate 2;
conductor structure 5 provided on said electrically insulating

substrate 2 and connecting said laser diodes with one another in series; and means for joint control of said laser diodes 1.

It is respectfully submitted that as specifically defined in claim 1, the distinctive features of the present invention reside in that the laser diodes are connected in series by the conductor structures provided on the electrically insulating (non-current conductive) material of the substrate.

Turning now to the references and particularly to the patent to Shieh, it is respectfully submitted that this reference deals with a LED display packaging with substrate removal and method of fabrication of the same. In accordance with the solution disclosed in this reference, there is no serial circuit, or in other words the reference does not disclose a plurality of laser diodes which are connected with one another by conductor structures provided on an electrically insulating (non current conductive) substrate or material in series.

It is believed to be clear that this reference does not teach the new features of the present invention which are now defined in the amended claim 1. These features also can not be derived from these reference as a matter of obviousness. In view of these remarks and amendments, it is

believed that claim 1 as amended should be considered a patentably distinguishing over the patent to Shieh, and therefore the rejection under 35 U.S.C. 102(b) over this reference should be considered as no longer tenable and should be withdrawn.

The patent to Herb discloses a structure and a method of mounting laser diode arrays. This reference also does not teach the new features of the present invention. The other references applied by the Examiner, namely the patents to Mayor and Gehring also do not teach the new features of the present invention as defined in the amended claim 1. Therefore, any combination of the references would lead only to such an arrangement which would not include the new features of the present invention as now defined in claim 1.

The new features of the present invention which are defined in claim 1 provide for the highly advantageous results. As specifically explained in the application, when the laser diodes are arranged on a common electrically insulating substrate in series and also jointly controlled, a very high efficiency is obtained. In the event of an optical failure of one laser diode, the electric series circuit is not interrupted and the remaining laser diodes remain operational with a high efficiency.

It is believed to be clear that the prior art does not teach the new features of the present invention. In order to arrive at the applicant's invention from the references taken singly or in combination, the references have to be fundamentally modified. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has also been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in re Randol and Redford (165 USPQ 586) that

Prior patents are references only for what they clearly disclose or suggestion; it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Definitely, the references do not disclose anything to suggest such significant modifications.

As explained hereinabove, the present invention provides for the highly advantageous results. It is well known that in order to support a valid rejection the art must also suggest that it would accomplish applicant's results. This was stated by the Patent Office Board of Appeals, in the case Ex parte Tanaka, Marushima and Takahashi (174 USPQ 38), as follows:

Claims are not rejected on the ground that it would be obvious to one of ordinary skill in the art to rewire prior art devices in order to accomplish applicants' result, since there is no suggestion in prior art that such a result could be accomplished by so modifying prior art devices.

In view of the above presented remarks and amendments, it is believed that claim 1, the broadest claim on file, should be considered as patentably distinguishing over the art and should be allowed.

As for the Examiner's rejection of some claims, it is respectfully submitted that the patent to Mayor deals with a method and an arrangement for a space-based operation of quantum-optical amplifiers embodied as optical waveguides. This reference however does not disclose a reserve laser diode defined in claim 8 and also does not disclose poor or defective laser diodes. It is therefore believed that claim 9 defines the features which should be considered as patentably distinguishing over the art not only because it depends on the presumably allowable claim 1, but also because it contains the patentable subject matter per se.


As for the other dependent claims, these claims depend on claim 1, they share its presumably allowable features, and therefore it is respectfully submitted that they should be allowed.

As required, applicant has submitted also new drawings.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,


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